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## A CASE OF *KLEBSIELLA PNEUMONIAE* ENDOPHTHALMITIS METASTASIZED FROM PROSTATITIS

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A case of *Klebsiella pneumoniae* endophthalmitis metastasized from prostatitis is reported. A 58-year-old alcoholismic man with diabetic diathesis suffered from endophthalmitis which required enucleation of his left eye, when he interrupted the treatment of prostatitis. Metastatic bacterial endophthalmitis from urinary tract infection is rare.

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**Key words:** Endophthalmitis, Prostatitis

### INTRODUCTION

Endophthalmitis is a sight-threatening ocular inflammatory disease to either infected or injured intraocular tissue. Endophthalmitis most often occurs after ocular surgery but may also develop from penetrating ocular trauma or local and systemic infections. Metastatic endophthalmitis caused by bacteria from urinary tract infections is relatively rare. We present an unusual case of *Klebsiella pneumoniae* endophthalmitis metastasized from prostatitis.

### CASE REPORT

A 58-year-old alcoholismic man was admitted with high fever and urinary retention. A swelling and severe tenderness of the prostate was noted by digital rectal examination, and he was diagnosed with acute prostatitis and septicemia (WBC 16,000). *K. pneumoniae* was cultured from his infected urine and EPS. After admission, an oral glucose tolerance test revealed mild diabetic diathesis. The fever and urinary symptoms subsided soon after intravenous administration of imipenem/cilastatin, and he was discharged from hospital after one week. Thereafter, he had been given oral medication of ofloxacin for treatment of bacterial prostatitis at our out-patient clinic. However, he disconti-

nued taking the medication for no particular reason.

One month after the discontinuance of the treatment, the patient visited our urological clinic again because of low grade fever and difficulty in micturition. The patient was diagnosed with relapse of acute prostatitis and septicemia (WBC 11,800), and we initiated the treatment with oral ofloxacin and intramuscular injection of gentamicin. *K. pneumoniae* was also isolated from the urine culture. After 5 days, he suddenly complained of a progressive loss of vision with severe pain on his left eye. He was transferred to the department of ophthalmology in a medical college immediately. Although he received

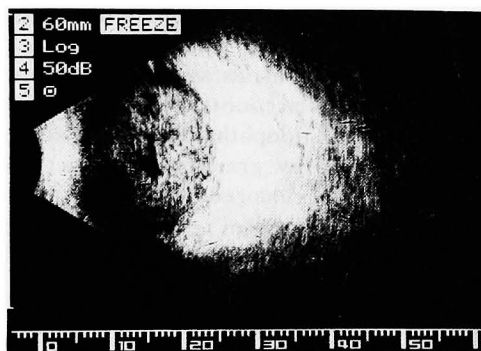


Fig. 1. Ultrasound findings of left eye. Dense vitreous opacity was increased severely, and a hypopyon was present in the anterior chamber.

Table 1. Sensitivity test against antibiotics of two strains of *K. pneumoniae*

| Antibiotics | EPS       | vitreous aspirate |
|-------------|-----------|-------------------|
| ABPC        | resistant | resistant         |
| PIPC        | sensitive |                   |
| CEZ         | sensitive | sensitive         |
| CTM         | sensitive |                   |
| CAZ         | sensitive |                   |
| LMOX        | sensitive | sensitive         |
| CPZ         | sensitive |                   |
| IPM         | sensitive | sensitive         |
| AMK         | sensitive |                   |
| MINO        | sensitive | sensitive         |
| OFLX        | sensitive | sensitive         |
| ST          | resistant |                   |

several aggressive treatments including injection of systemic or intraocular antibiotics and vitreous aspiration, evisceration of left eyeball contents was performed because of lack of improvement (Fig. 1). *K. pneumoniae* was isolated from the vitreous aspirate by culture. Table 1 shows the results of antibiotic sensitivity test of two strains of *K. pneumoniae*. Judging from the clinical course and bacteriological data, we considered the cause of endophthalmitis to be *K. pneumoniae* metastasized from the recurrence of prostatitis.

### COMMENT

Endophthalmitis is an aggressive, promptly developing, rapidly progressing ocular inflammation, and it often causes complete loss of vision. The cases of endophthalmitis are divided into two categories according to cause, exogenous (including ocular surgery, penetrating trauma and ulcer) and endogenous (metastasis). Endogenous endophthalmitis accounts for less than 10% of the cases. Endophthalmitis is most frequently caused by gram-positive bacteria, especially *Staphylococcus epidermidis*.

According to a recent report<sup>1)</sup>, gram-negative organisms were isolated in about 18

% of the cases of clinical endophthalmitis. *Pseudomonas aeruginosa* is the most common organism, and *K. pneumoniae* is relatively rare among the gram-negative bacteria. Recently, Liao et al (1992) described 12 patients with endogenous endophthalmitis caused by *K. pneumoniae*<sup>2)</sup>. Eleven of them had diabetes mellitus, and liver abscess was thought to be the primary focus of the endophthalmitis in 6 cases. Generally, endophthalmitis caused by gram-negative organisms results in loss of vision in spite of prompt treatment with intraocular antibiotics, vitrectomy or lensectomy.

There was one case of metastatic *K. pneumoniae* endophthalmitis following extracorporeal shock wave lithotripsy (ESWL) for renal stone<sup>3)</sup>. So-called urosepsis from pyelonephritis or prostatitis is relatively common clinically. However, metastatic bacterial endophthalmitis from urinary tract infection is quite rare. The reasons for the rarity may be the widespread use of suitable antibiotic therapy for bacteremia, and the existence of physiological barriers such as blood brain barrier or blood retinal barrier, which may prevent the septic emboli from reaching the brain or eye.

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和文抄録

前立腺炎から波及した眼内炎の1例

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戎野 庄一，宮井 将博

58歳男性の前立腺炎の治療中断中に，前立腺炎の起炎菌である *Klebsiella pneumoniae* の波及によると思われる左眼内炎を発症した症例を経験したので報告した．本症例は不幸にも眼科的治療が奏効せず左眼球摘

出がなされた．尿路感染症からの細菌性眼内炎の報告は少ない．

（泌尿紀要 40：625-627，1994）